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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,612	05/08/2006	Yoshihiko Koizumi	290837US3PCT	3452
22850 7590 09/10/2009 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
CHAN, KAWING				
ART UNIT		PAPER NUMBER		
2837				
NOTIFICATION DATE		DELIVERY MODE		
09/10/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/578,612

Applicant(s)

KOIZUMI ET AL.

Examiner

Kawing Chan

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The Amendments and Applicant Arguments submitted on 06/09/09 have been received and its contents have been carefully considered. The examiner wishes to thank the Applicant for the response to the Examiner's action and for amending the claims in the appropriate manner.

Claims 6-11 are newly added.

Claims 1-11 are pending for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kulak et al. (US 5,669,465) in view of Deplazes (WO 03/080495 A1) (hereinafter all the rejections in the following are based on the equivalent English translation Deplazes US 2005/0034931 A1).

In Re claim 1, Kulak discloses an elevator interlock apparatus (Figures 1 and 6) comprising:

- A catch (13) disposed on a landing entrance (hoistway);
- A latch (8) disposed on a landing door so as to engage with the catch and prevent movement of the landing door in a door opening direction when the landing door is in a fully-closed state (Figure 6); and
- A release detector (35, 36, 37) configured to detect whether or not the latch is in a position engaged with the catch (Col 3 lines 35-57),
- Wherein the release detector is provided at an upper portion of the landing entrance (Figures 1 and 6).

Kulak fails to disclose the release detector detects a change in a magnetic field without contacting the latch.

However, Deplazes discloses a release detector (15, 54, 55) for detecting whether or not the latch (18, 28, 52) is in a position engaged with the catch (31) by detecting a change in a magnetic field without contacting the latch (18, 28, 52) (Figures 2 & 4; Paragraphs [0025, 0027, 0028, 0041]).

Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have modified the teachings of Kulak with the teachings of Deplazes, since it is known in the art to utilize the detection of magnetic field to detect the engagement of the latch and catch in an elevator interlock apparatus so as to be able to detect the interlock state of the locking device in a contact-less mode. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in

their respective functions, and the combinations would have yielded predictable results to one of ordinary skill in the art at the time of the invention was made.

In Re claim 2, Deplazes discloses an elevator interlock apparatus (18) further comprising:

- A detected portion (19, 59) includes a magnet (Paragraph [0041]) is disposed on the latch (18, 52); and
- The release detector (15, 54, 55) includes a detecting portion composed of an electrically-conductive material facing the detected portion (19, 59) and detects the change in the magnetic field via an electric current generated in the detecting portion (Figures 2 & 4; Paragraphs [0040, 0041, 0047]).

In Re claim 3, Deplazes discloses a control portion (16) that determines a state of the latch (18) based on signal from the release detector (15, 19) and controls motion of a car (12) (Paragraph [0027]).

4. Claims 4 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kulak et al. (US 5,669,465) in view of Deplazes (WO 03/080495 A1) (hereinafter all the rejections in the following are based on the equivalent English translation Deplazes US 2005/0034931 A1) as applied to claims 1 and 3 above, and further in view of Cerny et al. (US 5,644,111).

In Re claim 4, Kulak discloses the control portion (controller) permits motion of the car when the release detector (35, 36, 37) detects that engagement between the catch and the latch has been released (only allow the car moves when the door is properly locked) (Col lines 35-57), but Kulak in view of Deplazes fails to disclose a fully-closed-state detector, and the control portion prohibits motion of the car when the fully-closed state detector detects that the landing door is in an open state.

However, with reference to Figures 1-3, Cerny discloses a fully-closed-state detector (30) configured to detect the landing door (hatch door) is in the fully-closed state (Col 4 line 61 to Col 5 line 4).

Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have modified the teachings of Kulak and Deplazes with the teachings of Cerny, since it is known in the art to utilize a light detector to detect the fully-closed-state of a shaft door so as to be able to signal people before the possibility of a fall. Although Cerny does not explicitly states the car is stopped when the fully-closed-state detector detects that the landing door is in an open state, it would have been obvious to one skilled in the art to stop the motion of the car when the landing door is open so as to be able to prevent people fall into the elevator shaft.

In Re claim 6, with reference to Figures 1-3, Cerny discloses a fully-closed-state detector (30) configured to detect whether the landing door (hatch door) is in the fully-

closed state (Col 4 line 61 to Col 5 line 4), and wherein the fully-closed state detector is provided on the upper portion of the landing entrance (Figure 1B).

In Re claim 7, with reference to Figures 1-3, Cerny discloses a fully-closed-state detector (30) configured to detect the landing door (hatch door) is in the fully-closed state (Col 4 line 61 to Col 5 line 4) regardless of the latch is engaged with the catch (they are separate devices).

In Re claim 8, Deplazes discloses a car (12) which travels between plurality of floors (Figure 1), and wherein each of the plurality of floors includes a landing door (Figure 1).

In Re claim 9, Cerny discloses the fully-closed-state detector (30, 38) of a landing door of one of the plurality of floors is configured to detect whether the landing door of one of the plurality of floors is in the fully-closed-state regardless of whether the car is located at the one of the plurality of floors (Figure 1B).

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kulak et al. (US 5,669,465) and Deplazes (WO 03/080495 A1) (hereinafter all the rejections in the following are based on the equivalent English translation Deplazes US 2005/0034931 A1) in view of Cerny et al. (US 5,644,111) as applied to claim 4 above, and further in view of JP 2002-154774 (hereinafter called as JP).

In Re claim 5, Kulak, Deplazes and Cerny have been discussed above, but they fail to disclose the control portion permits motion of the car if it is determined that the landing door is in a fully-closed state even if it is determined that engagement between the catch and the latch has been released.

However, with reference to Figures 1-2, JP discloses an elevator system comprises 1st detection means (6) & 3rd detection means (7) for detecting the door lock engagement of the shaft door and the car door respectively, and 2nd detection means for detecting the fully-closed state of both the doors (Claim 1; Paragraphs [0009, 0010, 0017]), wherein JP further discloses the elevator is operable with only one detection means is properly working (Paragraph [0022]), therefore, the elevator would operate normally even one of the detection means abnormal state of the elevator door.

Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have modified the teachings of Kulak, Deplazes and Cerny with the teachings of JP, since it is known in the art to utilize multiple sensors to detect the state of an elevator door so that the operation of the elevator, shaft door and elevator door can be closely monitored.

6. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kulak et al. (US 5,669,465) and Deplazes (WO 03/080495 A1) (hereinafter all the rejections in the following are based on the equivalent English translation Deplazes US

2005/0034931 A1) in view of Cerny et al. (US 5,644,111) as applied to claim 6 above, and further in view of Kutz (US 6,382,362 B1).

In Re claim 10, Kulak, Deplazes and Cerny have been discussed above, but they fail to disclose the recited limitations.

However, Kutz discloses a door hanger (Figure 2); and a shielding plate (36) provided to the door hanger, wherein the door hanger moves with the landing door, and wherein the fully-closed-state detector (10) detects the fully-closed-state when the shielding plate is positioned between the fully closed-stated detector and the door hanger.

While Cerny discloses a fully-closed-state detector is located in the upper portion of the landing door entrance to transmit and receive optical signals, it would have been obvious to one skilled in the art at the time of the invention was made to have modified the teachings Kutz to place the detector nearby the upper portion of the landing door entrance (although Kutz fails to explicitly discloses the location of the receiver and transmitter), and it has been held that rearranging parts of an invention involves only routine skill in the art. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combinations would have yielded predictable results to one of ordinary skill in the art at the time of the invention was made.

In Re claim 11, Cerny discloses the fully-closed-state detector is an optical switch (30).

Response to Arguments

7. Applicant's arguments submitted on 06/09/09 have been fully considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Angst et al. and Gozzo et al. are further cited to show related teachings in the art.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kawing Chan whose telephone number is (571)270-3909. The examiner can normally be reached on Mon-Fri 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Benson can be reached on 571-272-2227. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. C./
Examiner, Art Unit 2837

/Walter Benson/
Supervisory Patent Examiner, Art Unit 2837